Attachment 8

Quality Assurance

Attachment 8: Quality Assurance

The Three Valleys Municipal Water District (TVMWD) and Six Basins Watermaster (Watermaster) will follow well-defined quality assurance and quality control measures. Each consultant retained in the execution of this project will have written Standard Operating Protocols (SOPs) for the relevant work to be performed.

- **Quality Assurance Procedures.** Procedural assurances, such as review processes for quality of reports, data, and laboratory analyses. Technical review of the work completed for the proposed project will be reviewed by a Registered California Engineer and or a Professional Geologist, as appropriate. All (100 percent) project data will undergo thorough quality assurance/quality control checks prior to being uploaded into the project database – both automated and visual.
- **Personnel Qualifications.** Personnel qualifications may include professional registrations (such as a Registered California Engineer [PE] and/or a Professional Geologist [PG]), certifications, and experience of persons performing and overseeing work to be performed. Work performed for this project will be completed with the oversight of a licensed California Professional Geologist or California Professional Engineer. All staff assigned to this project will have the appropriate level of experience working in similar projects.
- **Technical Review Committee.** The project will have a technical review committee (TRC) that will meet at key milestones during the project, for example at project kickoff, development of the conceptual model, steady-state calibration, etc. The TRC will be comprised of the project team's senior groundwater modeling expert, a representative from the stakeholder group, and an independent consultant who is recognized as a leading expert in regional groundwater simulation modeling.
- **Stakeholder Process.** A stakeholder process will be used to ensure that the project scope is followed and that intermediate work products are reviewed in a timely fashion. Several tasks include an interim deliverable/report that will be distributed to the stakeholders who will provide technical comments. These comments will be received and addressed, as appropriate, by the project team. This feedback on interim work products is critical to the success of this project.
- **Industry-Standard Groundwater Simulation Model.** The USGS has developed a modular finite-difference model that solves the groundwater flow equation. MODFLOW is the industry standard for the simulation of groundwater flow through porous media. The following standards will be used to in the development and application of a groundwater model: Standard Guide for Comparing Ground-Water Flow Model Simulations to Site-Specific Information (ASTM, 1993); Standard Guide for Calibrating a Ground-Water Flow Model Application (ASTM, 1996); and Guidelines for Evaluating Ground-Water Flow Models (USGS, Reilly and Harbaugh, 2004). The hydrogeologists that will develop the conceptual model and the hydrogeologist that will build and calibrate the numerical model are both California-licensed professional geologists with over 20 years of experience and have successfully developed several regional groundwater-flow models.